

AMENDMENTS TO THE DRAWINGS

The attached drawing sheets (4) include changes to Figures 2, 3, 4 and 5. These sheets replaces the original sheets containing Figures 2, 3, 4 and 5.

FIGS. 2 and 3 have been amended to include reference numbers 100 and 10, respectively;

FIG. 3 has been amended to delete reference character 23; and

FIGS. 4 and 5 have been amended to replace reference numeral 310 with 313.

REMARKS

Applicants have carefully considered the September 6, 2006 Office Action, and the amendments above together with the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-4 are pending in this application. In response to the Office Action dated September 6, 2006, claims 1 and 4 have been amended. Drawing FIGS. 2-5 have been amended as indicated above. The specification has been amended to address minor informalities. Care has been exercised to avoid the introduction of new matter. Adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure as, for example, the depicted embodiments and related discussion thereof in the written description of the specification, including Table 1. Applicants submit that the present Amendment does not generate any new matter issue. Entry of the present Amendment is respectfully solicited. It is believed that this response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

The drawings were objected to for not including reference signs mentioned in the description. FIGS. 2 and 3 have been amended to include reference numbers 100 and 10, respectively.

FIG. 3 has been amended to delete reference character 23.

With respect to reference characters 211, 220, 222, 311, 320 and 322, the specification, at page 10, has been amended to include these reference numerals. However, with respect to reference numerals 40, 50, 60 and 70, the Examiner's attention is respectfully directed to page 7, lines 2-9, wherein each of these reference characters are described.

FIGS. 4 and 5 have been amended to replace reference numeral 310 with 313. Thus, reference numeral 313 designates the carbon particles. The specification, at page 10, line 23, has been amended accordingly.

In view of the foregoing amendments to the specification and drawing FIGS. 2-5, Applicants respectfully request reconsideration and withdrawal of the drawing objections at page 2-4 of the Office action.

The title and abstract have been amended to address the Examiner's objections. Moreover, the specification has been amended to replace the term "membrane" with "membrane" as noted by the Examiner. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objections to the specification.

Claim 4 was rejected under 35 U.S.C. § 112, second paragraph and 35 U.S.C. § 101 as being improperly directed to a "use" claim. Applicants respectfully request reconsideration and withdrawal of the rejections in view of the foregoing amendment to claim 4. Claim 4 has been rewritten in independent form and no longer depends from claim 1. Moreover, the "use" language has been deleted from the claim. Accordingly, one having ordinary skill in the art would not have difficulty understanding the scope of the presently claimed invention, particularly when reasonably interpreted in light of the supporting specification. Therefore, it is respectfully submitted that the imposed rejection of claim 4 under 35 U.S.C. § 112, second paragraph is not legally viable and hence, solicit withdrawal thereof.

Claims 1 and 4 were rejected under 35 U.S.C. § 102(b) as being unpatentable over Applicants Admitted Prior Art (AAPA). The Examiner referred to the comparative example at Table 1 on page 15 of the specification which discloses an arithmetic average roughness Ra of 15 $\mu$ m. Applicants respectfully traverse.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the possession of one having ordinary skill in the art. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994). Moreover, in imposing the rejection under 35 U.S.C. § 102, the Examiner is required to specifically identify wherein an applied reference is perceived to identically disclose each feature of a claimed invention. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). There are significant differences between the claimed inventions and the fuel cell disclosed by AAPA that would preclude the factual determination that AAPA identically describes the claimed inventions within the meaning of 35 U.S.C. § 102.

Specifically, independent claim 1, as amended, recites an electrode for a fuel cell. The electrode includes a catalyst layer; and a gas diffusion layer stacked on the catalyst layer. The arithmetic average roughness Ra of the surface of the gas diffusion layer on a side in contact with the catalyst layer is 11 µm or less.

Independent claim 4, as amended, discloses a fuel cell including, in pertinent part, an arithmetic average roughness Ra of a surface of the gas diffusion layer on a side in contact with the catalyst layer being 11 µm or less.

The comparative example disclosed in the specification has an arithmetic average roughness Ra of 15 µm. Thus, the argued differences between the claimed subject matter and the AAPA undermines the factual determination that the AAPA discloses a fuel cell or an electrode identically corresponding to that claimed. *Minnesota Mining & Manufacturing Co. v. Johnson &*

*Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 U.S.P.Q. 86 (Fed. Cir. 1986). Applicants, therefore, submit that the imposed rejection under 35 U.S.C. § 102 for lack of novelty as evidenced by the AAPA is not factually viable and, hence, solicit withdrawal thereof.

Dependent claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Tani et al. (U.S. Pat. App. Pub. No. 2004/0115499, hereinafter “Tani”). The Examiner relied on the teachings of Tani as disclosing a gas diffusion electrode with a maximum height  $R_{max}$  of surface roughness at  $40\mu m$  or less. The Examiner concluded that since Tani (numbered paragraph [0096]) discloses that when the surface roughness  $R_a$  is less than the specified value, the membrane-electrode structure has a superior power generation efficiency due to an optimize value of the ratio of the surface area to the unit area and the differential pressure between one side of the diffusion electrode and the other side thereof. Applicants respectfully traverse.

Tani qualifies as “prior art” under 35 U.S.C. § 102(e) since the filing date of the Tani reference is November 26, 2003, which is less than one month prior to the filing date of the present Application, which was filed with the U.S. Patent & Trademark Office (USPTO) on December 1, 2003.

The present Application claims foreign priority (35 U.S.C. § 119) to Japanese Application No. 2002-349925, filed on December 2, 2002. A certified copy of Japanese Application No. 2002-349925 was previously submitted to the USPTO on December 1, 2003.

Submitted concurrently herewith, is a certified English translation of Japanese Application No. 2002-349925. Therefore, Applicants are entitled to the effective filing date of December 2, 2002, which predates the U.S. filing date of the Tani reference. Applicants submit

that the Tani reference does not qualify as “prior art” under any of the provisions of 35 U.S.C. § 102. Therefore, even if the applied references are combined as suggested by the Examiner, and Applicants do not agree that a requisite fact-based motivation has been established, the subject matter of claim 2 would not result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). Accordingly, the rejection under § 103 is not legally viable and should be withdrawn.

Dependent claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of JP 10-289732 ('732 application). Applicants respectfully traverse.

Applicants incorporate herein the arguments previously advanced in traversal of the rejection of claims 1 and 4 under 35 U.S.C. § 102 predicated upon AAPA. The secondary reference ('732 application) does not cure the argued deficiencies of the AAPA pertaining to the arithmetic average roughness Ra. Thus, even if the applied references are combined as suggested by the Examiner, and Applicants do not agree that the requisite realistic motivation has been established, the claimed invention will not result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, *supra*.

It is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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